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ABSTRACT

Developmental changes in computer training in response to new software and services make the problems of training computer novices more complicated. This paper focuses on methods for training the "haves" and "have nots." The "haves" are those who have had computer technology training in a previous era. The "have nots" have Internet access but no prior computer or technology training. Training for these users must include navigation and basic use skills. The training design should take into account the learner's history, preferred learning style, and motivation; the social setting; psychological dimensions; and a preference for the practical. The uses of training and paths for training are presented for "have" and "have not" users in the community and in education. Training the "have nots" differs mainly in requiring demonstrations of specific computer and software uses. While the methods for training are similar, training "have nots" requires more meaningful exercises and discussion of completed exercises. A nonthreatening approach and attention to student motivation are required for training new users and converting old users to new approaches. (SLD)

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# TRAINING: REACHING THE HAVES AND HAVE NOTS

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## ABSTRACT

Computer training has gone through developmental changes in response to new software and services. Making sure the computer novices don't become the information "have nots" drives training today. Differing training needs of the "haves" and the "have nots" using the Information Superhighway will be the focus of this paper.

Training for computer users has been ever changing. From the early years of training on specific operating systems and packages, through the point and click era, to today's information highway era, this paper focuses on methods for training both the "haves" and the "have nots".

The "haves" are those who have had computer/technology training in one of the previous eras; the "have nots" have Internet access but no prior computer/technology training. Avoiding pitfalls that have previously plagued the computer training arena will also be discussed.

The early years of computer training involved teaching programming languages, statistics or graphic packages on the mainframe. Those receiving the training included computer science majors, faculty conducting research, faculty and staff from select disciplines, and administrative computer users. These users were the keepers of the secrets and were held in high esteem by the uninitiated. Policy and procedure decisions were based on the wisdom of these gurus (geeks, guardians). If they said it couldn't be done, then the need to get it done went away.

Beginning in the late 1970's with the personal computer becoming more available in the office and in the home, the focus of training changed. Training on various PC packages became the norm; these packages were single solution

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applications including wordprocessing, database, and spreadsheet. Each was touted to be **the** solution for office automation. The audience receiving the training on these new tools grew considerably. Training became available in the form of hands-on, video, and CBT, among others. The audience included people at home, in public schools, and from small businesses. Even though this era saw tremendous growth in the user base, the guru-like status still prevailed. Users prided themselves in mastering the latest and most obscure commands to customize their programming, operations, and output. They were, however, more willing to share their knowledge, and the parade of quasi-technical computer-zines began. These users were also many of the first to experience the excitement of connectivity and began to use BITNET and other precursors of the Internet. The "I have a modem" syndrome enveloped higher education faculty, staff, and administrators. From this followed the national cry "Pro Pluribus Modem". The era of information overload began. The exchanges ranged from the simple electronic mail ("Gee, this really works! Cool!!) to scholarly collaborations that were previously more time consuming and difficult.

Next, we experienced the "Point and Click" era of users. As Windows and OS2 replaced DOS as the operating system on PCs and Macintosh computers replaced the Apple predecessors, the training audience grew and became more diverse. Many training methods and materials became obsolete. Training on individual software packages took on a point and click flavor as trainers guided users through a series of pull-down menus and windows of information. These PC packages now took on a suite flavor and data could do double and triple duty. Often a solution, however, was more time-consuming than data re-entry or other repetitious tasks. Health care systems, libraries, government, community/economic development, cooperative extension service as well as education were now part of the training audience. Point and click took away some of the mystique and the role played by the guardians of the previous eras. Their secrets were now exposed, and their solutions more available to the uninitiated. The guardians' cry turned to "Give me JCL or give me DOS!" This was a problem for trainers who were focusing on productivity for those who needed to learn new skills. A few guardians in the audience could lead to a barrage of questions such as "How would I do this in DOS?", "Where is my command prompt?", and "Why would anyone need more than 2400 baud?"

With the introduction of client-server architecture, affordable connectivity, dropping prices and increasing power of PCs, and the increased governmental involvement

in technology, the audience has grown tremendously and has quickly been divided into the "haves" and "have nots" in terms of being able to use computers and technology. The "haves" who were a part of one or more of the previous eras know how to use computers and are quite insulted by a point and click approach to training. Training for these users must focus on locating necessary information as quickly and efficiently as possible. Training for the "have nots", who are really using computers for the first time, must include navigation and basic use skills. These users must also be taught what is available to them as well as how to access it in a timely manner.

A few words about good pedagogy of training are necessary. These constructs are taken from notables such as Bruner, Jakobson, Piaget, Apps among others and presented as we have used them in designing training across the eras. The design of training should take into account the learner's history, preferred learning style, the social setting, the learner's motivation, psychological dimensions, and a preference for the practical.

Trainers often need to be reminded that they are teaching people not applications. This requires a look at the training scenario. A successful training session is comprised of a small group of people gathered to engage in hands-on problem-solving activities with the trainer as facilitator; a desired outcome is independent learners. Training relies on a linguistic interplay between trainer and attendee. An experienced trainer knows the subtle interaction of language and thought; attendees should leave the session as thinkers not memorizers. A training session can be characterized as containing an addresser, an addressee, a contact which joins them, a message passing between them, a context for the message and a linguistic code. The addresser, addressee, contact, and message parts are evident because the training session is scheduled and people come. The linguistic code is dictated by the topic of the session and the jargon of the field. The trainer must be aware of the pre-knowledge of the attendees to determine whether minimal or extensive review of definitions and simple concepts is required. The more difficult aspect for the trainer is to monitor the context as the session unfolds. Is the audience understanding both your words and the actions required? Is the translation of "This is how you do it" becoming part of the attendees repertoire? Are attendees able to use action in situations different from those given as examples in the session?

Trainers must be aware of the attendees level of expertise as they enter the session. For example, the translation of words into action can be difficult for attendees lacking

keyboarding skills. A single attendee who lacks prerequisite knowledge can undo a class with questions whose answers are obvious to the rest of the group.

Trainers also need to focus on the needs of the audience. Attendees have expectations of a training session; it is necessary to meet the expectations and then take the group one step further - to challenge them to use what they have learned in the session in new situations and to get them to see how the session is relevant to situations they may confront at their own desks.

Pitfalls that have plagued the computer training industry in previous eras should be avoided. These include:

-training for training sake
-demonstrating instead of a hands-on approach
-training on resources not readily available
-untimely training, e.g. before the necessary hardware and software have been acquired
-mixing audiences that do not normally meet together, e.g. administrators and secretaries on a single campus
-mixing audiences of different skill levels, e.g. the frustrated and the bored
-not bridging the gap between a controlled training enviroment and the users natural environment
-not including using documentation as part of the training
-not making exercises or case studies practical or within the experience of the attendees

The audience of "haves" and "have nots" using the Information Superhighway come from all walks of life. They include persons in education, business, and at home. The resources available make the Information Superhighway a great avenue for conducting research, purchasing goods, learning, and communicating. This diversity of users requires different training paths depending on the type and comfort level of the user. The following plans describe uses of and paths for training "haves" and "have nots" in the community and in the education field. By community users, we mean the people who want to use networking for their own purposes; the education users also have the added task of teaching others how to use new systems.

<u>Community</u>

Uses of the Internet:

-access to support groups
-development of communication skills
-access to consumer information
-small business advertising
-access to library resources
-non-directive exploration

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Training "Have Nots":

**WHAT:**
-definition and knowledge of terminology
-navigation skills
-basic use skills (keyboarding, reading documentation)
-information on what's available
-demonstrations of specific uses: research and inquiry
-expeditious location of information (the best route)
-end-user competency as a goal

**METHODS:**
-lecture/demonstration
-class handouts and meaningful exercises
-discussion of completed exercises
-small group activities
-guided practice
-unguided practice

Training "Haves":

**WHAT:**
-review of terms and basic skills in a non-threatening and time-conscious manner
-location of information quickly and efficiently
-converting the hard-core oldtimers, those who want to hold on to their knowledge of systems without regard to new horizons - MOTIVATION

**METHODS:**
-lecture/demonstration
-unguided activities
-case studies
-small group activities

Education

Uses of the Internet:
-drill and practice
-writing skills
-communication skills
-modeling/simulation
-research
-access to databases, libraries
-access to support groups
-collaboration
-access to curriculum guides

Training "Have Nots":

**WHAT:**
-definition and knowledge of terminology
-navigation skills
-basic use skills (keyboarding, reading documentation)
-information on what's available
-end-user competency as a goal

**METHODS:**
-lecture/demonstration
-small group activities
-guided practice
-unguided practice

Training "Haves":

**WHAT:**
-review of terms and basic skills in a non-threatening and time-conscious manner
-location of information quickly and efficiently
-converting the hard-core oldtimers, those who want to hold on to their knowledge of systems without regard to new horizons - MOTIVATION
-end-user competency as a goal

**METHODS:**
-train the trainer
-partner training
-case study
-small group activities
-guided practice
-unguided practice
-modeling

These new user- specific and user-directed approaches to computer training will assist the "haves" and "have nots" as we move forward on the Information Superhighway. By employing the ideas many of the great educators had to offer about learning theories and by avoiding the pitfalls that previously plagued the computer training field, we can become a society of "haves" in terms of using the Internet. This approach to training provides the building blocks for individual inquiry and ownership. In the words of the poet

Guillaume:

Come to the edge, he said.
They said: we are afraid.
Come to the edge, he said.
They came.
He pushed them . . . and they flew.